

User Manual

Version 1.0
Revision Date: 08/30/2013

Product name: T7 Exonuclease

Cat #: T7G6E-100, T7G6E-200, T7G6E-300, T7G6E-OEM

Description:

T7 Exonuclease is similar to Lambda Exonuclease in that it catalyzes the stepwise hydrolysis of duplex DNA from the 5'-termini, liberating 5'-mononucleotides. However, unlike Lambda Exonuclease, the enzyme has low processivity and it will remove both 5'-hydroxyl and 5'-phosphoryl termini. T7 Exonuclease hydrolyzes duplex DNA non-processively in the 5' -> 3' direction from both 5'-phosphoryl or 5'-hydroxyl nucleotides by liberating oligonucleotides, as well as mononucleotides, until about 50% of the DNA is acid soluble.

Source:

Purified from an E. coli strain containing a TYB12 intein fusion.

Storage Conditions

10 mM Tris-HCl
5 mM DTT
0.1 mM EDTA
50% Glycerol
pH 8.0 @ 25°C

Application:

- Controlled stepwise digestion of double-stranded DNA from the 5'-termini.
- Generating ssDNA templates for sequencing via the chain-termination method.

Supplied with:

10X T7 Exonuclease Buffer

10X T7 Exonuclease Buffer:

500 mM Potassium Acetate
200 mM Tris-acetate
100 mM Magnesium Acetate
10 mM DTT
pH 7.9 @ 25°C

Unit Definition:

One unit is the amount of enzyme required to release 1 nmol of acid soluble nucleotide in 15 min at 37°C under standard assay conditions.

Recommended Storage Conditions: -20°C

Reference:

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4. Shon, M., Germino, J. and Bastia, D. (1982) J. Biol. Chem. 257, 13823-13827.
5. Nikiforov, T. T., Rendle, R. B., Goelet, P., Rogers, Y. H., Kotewicz, M. L., Anderson, S., Trainor, G. L. and Knapp, M. R. (1994) Nucl. Acids Res 22, (20), 4167-4175.
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